

## SEQUENCE LISTING

<110> Omniviral Therapeutics LLC  
 Levine, Howard L  
 Kerns, William D

<120> Antiviral Proteins with Improved Properties and Methods  
 Therefor

<130> 27432-501-061

<140> Not Yet Assigned

<141> 2004-10-08

<150> 60/510,060

<151> 2003-10-09

<160> 7

<170> PatentIn Ver. 2.1

<210> 1

<211> 102

<212> PRT

<213> Homo sapiens

<400> 1

```

Met Leu Gly Lys Phe Ser Gln Thr Cys Tyr Asn Ser Ala Ile Gln Gly
 1             5             10             15

Ser Val Leu Thr Ser Thr Cys Glu Arg Thr Asn Gly Gly Tyr Asn Thr
      20             25             30

Ser Ser Ile Asp Leu Asn Ser Val Ile Glu Asn Val Asp Gly Ser Leu
      35             40             45

Lys Trp Gln Pro Ser Asn Phe Ile Glu Thr Cys Arg Asn Thr Gln Leu
      50             55             60

Ala Gly Ser Ser Glu Leu Ala Ala Glu Cys Lys Thr Arg Ala Gln Gln
      65             70             75             80

Phe Val Ser Thr Lys Ile Asn Leu Asp Asp His Ile Ala Asn Ile Asp
      85             90             95

Gly Thr Leu Lys Tyr Glu
      100

```

<210> 2

<211> 101

<212> PRT

<213> Homo sapiens

<400> 2

```

Leu Gly Lys Phe Ser Gln Thr Cys Tyr Asn Ser Ala Ile Gln Gly Ser
 1             5             10             15

Val Leu Thr Ser Thr Cys Glu Arg Thr Asn Gly Gly Tyr Asn Thr Ser
      20             25             30

```

Ser Ile Asp Leu Asn Ser Val Ile Glu Asn Val Asp Gly Ser Leu Lys  
                   35                                  40                                  45

Trp Gln Pro Ser Asn Phe Ile Glu Thr Cys Arg Asn Thr Gln Leu Ala  
           50                                  55                                  60

Gly Ser Ser Glu Leu Ala Ala Glu Cys Lys Thr Arg Ala Gln Gln Phe  
   65                                  70                                  75                                  80

Val Ser Thr Lys Ile Asn Leu Asp Asp His Ile Ala Asn Ile Asp Gly  
                   85                                  90                                  95

Thr Leu Lys Tyr Glu  
                   100

<210> 3  
 <211> 321  
 <212> DNA  
 <213> Homo sapiens

<400> 3  
 aggaggacag ctatgctggg caagttcagc cagacctgct acaacagcgc gattcagggc 60  
 agcgtttctga ccagcacctg cgaacgtacc aatggtggct acaacacttc tagcattgat 120  
 ctgaacagcg tgattgagaa tgtggatggc tctctgaaat ggcagccgag caacttcatt 180  
 gaaacctgtc gcaacaccca gctggcgggc agctctgaac tggcggcaga atgcaagact 240  
 cgcgcgacgc agtttgtgag caccaagatc aacctggacg atcacatcgc gaacattgat 300  
 ggcaccctga agtatgaata a 321

<210> 4  
 <211> 5597  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 atccggatat agttcctcct ttcagcaaaa aaccctctcaa gaccggttta gaggccccaa 60  
 ggggttatgc tagttattgc tcagcgggtgg cagcagccaa ctcagcttcc tttcgggctt 120  
 tgtagcagc cggatctcag tgggtgggtgt ggtggtgctc gacatcctcg gggctctccg 180  
 gggcgagttc tggctggcta gcccgtttga tctcgagtta ttcatacttc aggggtgcat 240  
 caatgttcgc gatgtgatcg tccaggttga tcttggtgct caciaactgc tgcgcgcgag 300  
 tcttgcatc tgcgcgcagt tcagagctgc ccgccagctg ggtgttgcca caggtttcaa 360  
 tgaagttgct cggctgccat ttcagagagc catccacatt ctcaatcacg ctgttcagat 420  
 caatgctaga agtggtttag ccaccattgg tacgttcgca ggtgctggc agaacgctgc 480  
 cctgaatcgc gctgtttag caggtctggc tgaacttgcc cagcatatgt atatctcctt 540  
 cttaaagtta aacaaaatta tttctagagg ggaattgtta tccgctcaca attcccctat 600  
 agtgagtcgt attaatctcg cgggacgcag atctcgatcc tctacgccgg acgcatcgtg 660  
 gccggcatca ccggcgccac aggtgcgggt gctggcgctt atatcgccga catcaccgat 720  
 ggggaagatc gggctcgcca cttcgggctc atgagcgctt gtttcggcgt gggatatggtg 780  
 gcaggccccc tggccggggg actggtgggc gccatctcct tgcattgcacc attccttgcg 840  
 gcggcgggtgc tcaacggcct caacctacta ctgggctgct tcctaattgca ggagtcgcat 900  
 aaggagagag gtcgagatcc cggacaccat cgaatggcgc aaaacctttc gcggtatggc 960  
 atgatagcgc ccggaagaga gtcaattcag ggtggtgaat gtgaaaccag taacggtata 1020  
 cgatgtcgca gagtatgcc gtgtctctta tcagaccgtt tcccgcgtgg tgaaccaggc 1080  
 cagccacgtt tctgcgaaaa cgcgggaaaa agtggaagcg gcgatggcgg agctgaatta 1140  
 cattcccaac cgctggcac aacaactggc gggcaaaccag tcgttgctga ttggcgttgc 1200  
 cacctccagt ctggccctgc acgcgccgtc gcaaattgtc gcggcgatta aatctcgcg 1260  
 cgatcaactg ggtgccagcg tgggtggtgc gatggtagaa cgaagcggcg tcgaagcctg 1320  
 taaagcggcg gtgcacaatc ttctcgcgca acgcgtcagt gggctgatca ttaactatcc 1380

gctggatgac	caggatgcc	ttgctgtgga	agctgcctgc	actaatgttc	cggcggttatt	1440
tcttgatgtc	tctgaccaga	cacccatcaa	cagtattatt	ttctcccatg	aagacggtac	1500
gcgactgggc	gtggagcatc	tggtcgcatt	gggtcaccag	caaatcgcg	tgtagcggg	1560
cccattaagt	tctgtctcgg	cgcgctctgcg	tctggctggc	tggcataaat	atctcactcg	1620
caatcaaatt	cagccgatag	cggaacggga	aggcgactgg	agtgccatgt	ccggttttca	1680
acaaaccatg	caaagtctga	atgagggcat	cgttcccact	gcgatgctgg	tgccaacga	1740
tcagatggcg	ctgggcgcaa	tgcgcgccat	taccgagtc	gggctgcg	ttggtgcgga	1800
tatctcggta	gtgggatacg	acgataaccga	agacagctca	tggtatatcc	cgccggttaac	1860
caccatcaaa	caggattttc	gcctgctggg	gcaaaccagc	gtggaccgct	tgctgcaact	1920
ctctcagggc	caggcggtga	agggcaatca	gctgttgccc	gtctcactgg	tgaaaagaaa	1980
aaccaccctg	gcgcccaata	cgcaaaccgc	ctctccccgc	gcgttgccg	attcattaat	2040
gcagctggca	cgacagggtt	cccgactgga	aagcgggcag	tgagcgcaac	gcaattaatg	2100
taagttagct	cactcattag	gcaccgggat	ctcgaccgat	gcccttgaga	gccttcaacc	2160
cagtcagctc	cttcgggtgg	gcgcggggca	tgactatcgt	cgccgcactt	atgactgtct	2220
tctttatcat	gcaactcgta	ggacagggtg	cggcagcgct	ctgggtcatt	ttcggcgagg	2280
accgctttcg	ctggagcgcg	acgatgatcg	gcctgtcgct	tgcggtattc	ggaatcttgc	2340
acgccctcgc	tcaagccttc	gtcactgggtc	ccgccaccaa	acgtttcggc	gagaagcagg	2400
ccattatcgc	cggcatggcg	gccccacggg	tgcgcgatga	cgtgtcctcg	tcgttgagga	2460
ccgggctagg	ctggcggggt	tgccctactg	gttagcagaa	tgaatcacgc	atacgcgagc	2520
gaacgtgaag	cgactgtctg	tgcaaaacgt	ctgcgacctg	agcaacaaca	tgaatggtct	2580
tcggtttccg	tgtttcgtaa	agtctggaaa	cgcgggaagtc	agcgccctgc	accattatgt	2640
tcgggatctg	catcgcagga	tgctgctggc	taccctgtgg	aacacctaca	tctgtattaa	2700
cgaagcgctg	gcattgaccc	tgagtgattt	ttctctgggtc	ccgccgcac	cataccgcca	2760
gttgtttacc	ctcacaacgt	tccagtaacc	gggcatgttc	atcatcagta	accggtatcg	2820
tgagcatcct	ctctcgtttc	atcggtatca	ttacccccat	gaacagaaat	cccccttaca	2880
cggaggcatc	agtgaccaa	caggaaaaaa	ccgcccttaa	catggcccg	tttatcagaa	2940
gccagacatt	aacgcttctg	gagaaactca	acgagctgga	cgcggtatga	caggcagaca	3000
tctgtgaatc	gcttcacgac	cacgctgatg	agctttaccg	cagctgcctc	gcgcgtttcg	3060
gtgatgacgg	tgaaaacctc	tgacacatgc	agctcccgga	gacggtcaca	gctgtgtctgt	3120
aagcggatag	cgggagcaga	caagcccgtc	agggcgcgct	agcgggtgtt	ggcggtgtgc	3180
ggggcgagc	catgaccag	tcacgtagcg	atagcggagt	gtatactggc	ttactatgtc	3240
ggcatcagag	cagattgtac	tgagagtgca	ccatatatgc	ggtgtgaaat	accgcacaga	3300
tgcgtaagga	gaaaataccg	catcaggcgc	tcttcgctt	cctcgctcac	tgactcgctg	3360
cgctcggtcg	ttcggtcg	gcgagcggt	tcagctcact	caaaggcggt	aatacggtta	3420
tccacagaat	caggggataa	cgcaggaaag	aacatgtgag	caaaaggcca	gcaaaggcc	3480
aggaaccgta	aaaaggccgc	gttgcgtggc	ttttcccata	ggctccgccc	ccctgacgag	3540
catcacaaaa	atcgacgctc	aagtcagagg	tggcgaaacc	cgacaggact	ataaagatac	3600
caggcggttc	ccccgggaag	ctccctcggt	cgctctcctg	ttccgacctt	gccgcttacc	3660
ggataacctg	cgccctttct	cccttcggga	agcgtggcgc	tttctcatag	ctcacgctgt	3720
aggatatctca	gttcggtgta	ggctcgttcg	tccaagctgg	gctgtgtgca	cgaaccccc	3780
gttcagcccc	accgctgcgc	cttatccggt	aactatcgct	ttgagtccaa	cccggttaaga	3840
cacgacttat	cgccactggc	agcagccact	ggtaacagga	ttagcagagc	gaggtatgta	3900
ggcggtgcta	cagagttctt	gaagtgggtg	cctaactacg	gctacactag	aaggacagta	3960
tttggtatct	gcgctctgct	gaagccagtt	accttcggaa	aaagagttgg	tagctcttga	4020
tccggcaaac	aaaccaccgc	tggtagcggt	ggtttttttg	tttgcaagca	gcagattacg	4080
cgcagaaaaa	aaggatctca	agaagatcct	ttgatctttt	ctacgggggtc	tgacgctcag	4140
tggaacgaaa	actcacgtta	agggattttg	gtcatgaaca	ataaaactgt	ctgcttacat	4200
aaacagtaat	acaaggggtg	ttatgagcca	tattcaacgg	gaaacgtctt	gctctaggcc	4260
gcgattaaat	tccaacatgg	atgctgattt	atatgggtat	aaatgggctc	gcgataatgt	4320
cgggcaatca	ggtgcgacaa	tctatcgatt	gtatgggaag	cccgatgcgc	cagagttggt	4380
tctgaaacat	ggcaaaggta	gcgttgccaa	tgatgttaca	gatgagatgg	tcagactaaa	4440
ctggctgacg	gaatttatgc	ctcttcgcgac	catcaagcat	tttatccgta	ctcctgatga	4500
tgcatgggtta	ctcaccactg	cgatccccgg	gaaaacagca	ttccagggtat	tagaagaata	4560
tcctgattca	ggtgaaaata	ttgttgatgc	gctggcagtg	ttcctgcgcc	ggttgcatte	4620
gattcctggt	tgtaattgtc	cttttaacag	cgatcgcgta	tttcgtctcg	ctcaggcgca	4680
atcacgaatg	aataacggtt	tggttgatgc	gagtgatttt	gatgacgagc	gtaatggctg	4740
gcctgttgaa	caagtctgga	aagaaatgca	taaacttttg	ccattctcac	cggattcagt	4800
cgctcactgat	ggtgatttct	cacttgataa	cttatttttt	gacgagggga	aattaatagg	4860
ttgtattgat	ggttgacgag	tcggaatcgc	agaccgatac	caggatcttg	ccatcctatg	4920
gaactgcctc	ggtgagtttt	ctccttcatt	acagaaacgg	ctttttcaaa	aatatggtat	4980

```

tgataatcct gatatgaata aattgcagtt tcatttgatg ctcgatgagt ttttctaaga 5040
attaattcat gagcggatac atatttgaat gtatttagaa aaataaaca ataggggttc 5100
cgcgcacatt tccccgaaaa gtgccacctg aaattgtaaa cgттаатatt ttgttaaaat 5160
tcgcgttaaa tttttgttaa atcagctcat tttttaacca ataggccgaa atcggcaaaa 5220
tcccttataa atcaaaagaa tagaccgaga tagggttgag tgttggtcca gtttggaaca 5280
agagtccact attaaagaac gtggactcca acgtcaaagg gcgaaaaacc gtctatcagg 5340
gcgatggccc actacgtgaa ccatcaccct aatcaagttt ttgggggtcg aggtgccgta 5400
aagcactaaa tcggaaccct aaaggaggcc cccgatttag agcttgacgg ggaaagccgg 5460
cgaacgtggc gagaaaggaa gggaagaaag cgaaaggagc gggcgctagg gcgctggcaa 5520
gtgtagcggc cacgctgcgc gtaaccacca caccgcgcgc gcttaatgcg ccgctacagg 5580
gcgcgtccca ttcgcca 5597

```

&lt;210&gt; 5

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: FLAG Sequence

&lt;400&gt; 5

Asp Tyr Lys Asp Asp Asp Asp Lys

1

5

&lt;210&gt; 6

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 6

```

tcctcctgtc gatacgaccc gttcaagtcg gtctggacga tgttgtcgcg ctaagtcccg 60
tcgcaagact ggtcgtggac gcttgcattg ttaccaccga tgttgatgaag atcgtaacta 120
gacttgctgc actaactctt acacctaccg agagacttta ccgtcggctc gttgaagtaa 180
ctttggacag cgttgtgggt cgaccgcccc tgcgagacttg accgccgtct tacgtttctga 240
gcgcgcgtcg tcaaacactc gtggttctag ttggacctgc tagtgtagcg cttgtaacta 300
ccgtgggact tcatacttat t 321

```

&lt;210&gt; 7

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 7

Met Leu Gly Lys Phe Ser Gln Thr Cys Tyr

1

5

10